

REMARKS

Claims 1-24 are currently pending in the subject application, and are presently under consideration. Claims 1-24 stand rejected. Claims 1, 2, 4, 11, 13, 16 and 21 have been amended. Claim 19 had been cancelled. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Rejection of Claims 1-18 and 20-24 Under 35 U.S.C. §101

Claims 1-18 and 20-24 stand rejected under 35 U.S.C. §101 for nonstatutory subject matter. Claims 1, 11, 16 and 21 have been amended to overcome this rejection. Withdrawal of this rejection is requested for at least the following reasons.

Claim 1 has been amended to recite a method for optimizing circuit design, wherein first value sets comprise a first plurality of circuit configurations associated with a circuit design and wherein a second valued sets comprise a second plurality of circuit configurations associated with the circuit design. It is respectfully submitted that amended claim 1 recites elements of a substantial practical application of optimizing a circuit design. Thus amended claim 1 has a useful, tangible and concrete final result. Therefore, it is respectfully submitted that amended claim 1 is no longer rejectable under 35 U.S.C. §101.

Amended claim 11 recites that the first values sets comprise a plurality of circuit configurations associated with a circuit design and the real cost function comprises an analysis tool and a power/timing estimator for generating real costs as a function of power and timing characteristics. Similarly to claim 1, amended claim 11 recites elements of a substantial practical application. Therefore, it is respectfully submitted that amended claim 11 is no longer rejectable under 35 U.S.C. §101.

Claim 16 has been amended to incorporate the subject matter recited in claim 19. Amended claim 16 recites that a real cost function comprises an analysis tool for optimizing a circuit design, and a plurality of value sets being a plurality of circuit configurations generated by the analysis tool. Similarly to claim 1, amended claim 16 recites elements of a substantial

practical application. Therefore, it is respectfully submitted that amended claim 16 is no longer rejectable under 35 U.S.C. §101.

Amended claim 21 recites a system for minimizing a cost associated with a circuit design, wherein value sets comprise a plurality of circuit configurations associated with the circuit design. Similarly to claim 1, amended claim 21 recites elements of a substantial practical application. Therefore, it is respectfully submitted that amended claim 21 is no longer rejectable under 35 U.S.C. §101.

Claims 2-10, 12-15, 17-18 and 20, and 22-24, depend either directly or indirectly from amended claims 1, 11, 16, and 21, respectively, and recite statutory subject matter for at least the same reasons as stated above for their respective bases claims, and for the specific elements recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-18 and 20-24 under 35 U.S.C. §101 is respectfully requested.

II. Rejection of Claims 1, 2, 4, 5, 11-14, 16, 17, 18, 21, 22 and 24 Under 35 U.S.C. §103(a)

Claims 1, 2, 4, 5, 11, 13, 14, 16, 17, 18, 21, 22 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,181,945 to Lee ("Lee") in view of 'Structured Programming', by Dahl ("Dahl"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Independent claim 1 has been amended to recite a method for optimizing a circuit design comprising determining real costs for a plurality of first value sets represented as a plurality of real chromosomes, wherein the first values sets comprise a first plurality of circuit configurations associated with the circuit design, determining speculative costs for a plurality of second value sets represented as a plurality of speculative chromosomes, the speculative chromosomes representing value set variations of the first value sets, wherein the second values sets comprise a second plurality of circuit configurations associated with the circuit design and postponing validation of speculative chromosomes by generating subsequent generations of speculative

chromosomes and associated speculative costs from parents selected from at least one of the plurality of real chromosomes and the plurality of speculative chromosomes, until a predetermined validation criteria has been satisfied.

Real costs are defined in the specification as costs associated with a value set that are generated by a basis cost function, and speculative costs are defined in the specification as an approximate cost that would be generated by the basis cost function. The employment of speculative costs facilitates convergence of a desired solution by trading speed for accuracy. (See p. 3, l. 32 - p. 4, l. 6 of the present application).

Lee discloses selecting two zone paging plans having the lowest paging costs, and subjecting the two zone paging plans to a genetic operation to produce two children paging plans. Lee discloses that paging costs for two children paging plans are calculated (See Lee, Col. 11, Lines 24-26). Lee discloses one methodology for computing costs based on an Equation illustrated in Col. 5, lines 5-32 in Lee, and therefore one cost function. Lee discloses that the higher the probability terms in the Equation illustrated in Col. 5, lines 5-32, the less the paging cost. Lee then discloses replacing the two highest cost paging plans with the two children paging plans (See Lee, Col. 11, Lines 35-36).

Lee does not teach or suggest determining real costs for a plurality of first value sets represented as a plurality of real chromosomes, wherein the first values sets comprise a first plurality of circuit configurations associated with the circuit design, determining speculative costs for a plurality of second value sets represented as a plurality of speculative chromosomes, the speculative chromosomes representing value set variations of the first value sets, wherein the second values sets comprise a second plurality of circuit configurations associated with the circuit design, as recited in amended claim 1.

Nothing in Lee teaches or suggests that the paging costs for parent chromosomes are real costs and the paging costs for children chromosomes are speculative costs. Accordingly, Lee does not teach or suggest determining speculative costs for a plurality of second value sets represented as a plurality of speculative chromosomes, the speculative chromosomes representing value set variations of the first value sets, as recited in amended claim 1.

Applicant agrees that Lee does not teach or suggest postponing validation of speculative chromosomes by generating subsequent generations of speculative chromosomes and associated speculative costs from parents selected from at least one of plurality of real chromosomes and the plurality of speculative chromosomes, until a predetermined validation criteria has been satisfied, as recited in amended claim 1. However, in contrast to the contention of the Office Action, Dahl does not cure the deficiencies of Lee.

Dahl discloses a simple WHILE-DO loop (See Dahl, Page 19). Dahl does not disclose any method that could be construed as postponing validation of speculative chromosomes by generating subsequent generations of speculative chromosomes and associated speculative costs from parents selected from at least one of plurality of real chromosomes and the plurality of speculative chromosomes, until a predetermined validation criteria has been satisfied, as recited in amended claim 1. The WHILE-DO loop disclosed in Dahl checks for a condition, executes one or more instructions and checks for the condition again, and when the condition is met, the WHILE-DO loop is exited (See Dahl, Page 19). Dahl is completely devoid of generating subsequent generations of speculative chromosomes and associated speculative costs, until a predetermined validation criteria has been satisfied. In fact, Dahl does not teach or suggest any specific instruction that could be executed in the WHILE-DO loop. Accordingly, Dahl fails to makeup for the aforementioned deficiencies of Lee as suggested by the Examiner.

Furthermore, Applicant's representative respectfully submits that there is no motivation to combine and modify Lee and Dahl to provide the elements recited in amended claim 1. The fact that a prior art reference could be modified so as to produce the claimed device is not a basis for obviousness unless the prior art suggested the desirability of such a modification. *In re Gordon*, 733 F.2d 900, 901, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). As mentioned above, Lee does not teach or suggest real costs for real chromosomes and speculative costs for speculative chromosomes. Lee discloses only one cost, namely, paging costs. It is respectfully submitted that the Examiner has not set forth any reason to modify Lee to include any kind of second cost.

Additionally, without teaching or suggesting speculative chromosomes and speculative costs, it is respectfully submitted that there would be no need to postpone validation of speculative chromosomes, as recited in claim 1. Since Lee does not teach or suggest two different costs, and the paging costs disclosed in Lee are calculated for both parent and children paging plans, there would be no need to postpone any calculation of costs of any kind. Dahl does not teach or suggest anything that relates to genetic algorithms. Additionally, Dahl also fails to teach or suggest the desirability of postponing validation of speculative chromosomes, as recited in claim 1. Accordingly, Dahl does not provide any teaching or suggestion that would provide the desirability to modify the teachings of Lee and Dahl in the manner suggested by the Office Action.

Further still, the Federal Circuit has held that in order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method. *Beckman Instruments, Inc. v LKB Produkter AB*, 892 F.2d 1547, 1551, 13 U.S.P.Q.2d, 1301 (Fed. Cir. 1989). The combination of Lee and Dahl is completely devoid of any method for postponing validation of speculative chromosomes. Thus, the combination of Lee and Dahl does not enable one skilled in the art to postpone validation of speculative chromosomes by generating subsequent generations of speculative chromosomes and associated speculative costs from parents selected from at least one of a plurality of real chromosomes and a plurality of speculative chromosomes, until a predetermined validation criteria has been satisfied. Thus, it is respectfully submitted that the Examiner has not shown why or how one of ordinary skill in the art would combine and modify the teachings of Lee and Dahl in the manner suggested by the Office Action. Therefore, Lee and Dahl do not make claim 1 obvious. Accordingly, claim 1 should be patentable over the cited art.

Claims 2, 4 and 5 depend from amended claim 1. Claims 2, 4 and 5 should be patentable over the cited art for at least the same reasons as amended claim 1 and for the specific elements recited therein.

Additionally, claim 2 recites determining real costs for at least one speculative chromosome of a plurality of speculative chromosomes when a predetermined validation criteria

has been satisfied. Claim 2 further illustrates the difference between real costs and speculative costs. That is, when claim 2 is read with claim 1, both the real costs and the speculative costs are calculated for at least one speculative chromosome. As stated above, Lee only discloses one cost function. In Lee, there would not be a need to calculate paging costs twice for any paging zone using the same function. Thus, Lee and Dahl, taken individually or in combination, do not teach or suggest each and every element of claim 2.

Amended claim 4 further recites determining real costs comprising executing a real cost function on the plurality of real chromosomes and the determining speculative costs comprising executing an incremental cost function on the plurality of speculative chromosomes, the incremental cost function determines a speculative cost by approximating a cost effect of an incremental change in a value set of a speculative chromosome relative to a parent chromosome and a cost associated with the parent chromosome. Lee discloses only one paging cost function, and thus does not disclose an incremental cost function that approximates a cost effect of an incremental change in a value set, as recited in claim 4. Thus, Lee and Dahl, taken individually or in combination, do not teach or suggest each and every element of claim 4.

Furthermore, claim 5 recites assigning a real cost to a plurality of real chromosomes based on the minimum cost real chromosome in a plurality of real chromosomes and assigning a speculation cost to each generation of speculative chromosomes based on the minimum cost speculative chromosome in a respective generation. Lee discloses determining a paging cost of each zone paging plan (See Lee, Col. 11, Lines 19-20). Lee also discloses replacing two highest paging cost plans by two children paging plans (See Lee, Col. 11, Lines 35-36). Lee is silent on assigning any plurality of paging plans a cost other than the calculated paging cost for each plan. That is, Lee does not teach or suggest assigning a real cost to a plurality of real chromosomes based on the minimum cost real chromosome in a plurality of real chromosomes and assigning a speculation cost to each generation of speculative chromosomes based on the minimum cost speculative chromosome in a respective generation, as recited in claim 5. Thus, Lee and Dahl taken individually or in combination, do not teach or suggest each and every element of claim 5.

Amended independent claim 11 recites executing two different cost functions, namely, a real cost function and an incremental cost function. Amended claim 11 further recites that the incremental cost function determines a speculative cost by approximating a cost effect of an incremental change in a value set of a speculative chromosome relative to a parent chromosome and a cost associated with the parent chromosome.

As stated above with respect to amended claim 1, Lee discloses only one paging cost function. Thus, Lee does not teach or suggest executing an incremental cost function on a plurality of speculative chromosomes to generate a plurality of speculative costs for each of a plurality of speculative chromosomes, the incremental cost function determines a speculative cost by approximating a cost effect of an incremental change in a value set of a speculative chromosome relative to a parent chromosome and a cost associated with the parent chromosome, as recited in amended claim 11.

Lee also does not teach or suggest repeating execution of a genetic algorithm to produce subsequent generations of speculative chromosomes and repeating execution of an incremental cost function on subsequent generations to provide speculative costs for the subsequent generations of speculative chromosomes, until a predetermined validation criteria has been satisfied, as recited in amended claim 11. As stated above, Lee does not teach or suggest an incremental cost function. Therefore, Lee cannot teach or suggest repeating execution of an incremental cost function, as recited in amended claim 11. The addition of Dahl does not cure the aforementioned deficiencies of Lee. Dahl also does not teach or suggest two different costs functions. Dahl does not teach or suggest executing any type of cost function. Accordingly, Lee and Dahl, taken individually or in combination do not teach or suggest each and every element of claim 11.

Claims 13 and 14 depend either directly or indirectly from amended claim 11 and should be patentable over the cited art for at least the same reasons as amended claim 11 and for the specific elements recited therein.

Additionally, claim 12 recites generating an incremental cost function based on at least one real chromosome and associated real cost. Claim 12 further illustrates the difference

between the real cost function recited in amended claim 11, from which claim 12 depends, and the incremental cost function recited in claim 11. As stated above, none of the cited art teaches or suggests two different cost functions. Accordingly, Lee and Dahl, taken individually or in combination do not teach or suggest each and every element of claim 12.

Furthermore, claim 13 recites validating at least one speculative chromosome of a plurality of speculative chromosomes when a predetermined validation criteria has been satisfied, the validating at least one speculative chromosome comprising executing a real cost function on the at least one speculative chromosome to generate a real cost associated with the at least one speculative chromosome. The Office Action contends that "validating" as recited in claim 13 is equivalent to "replaced," as disclosed by Lee (See Office Action, Page 8). Applicant respectfully disagrees. Lee discloses that two highest paging cost plans are replaced by two children paging plans (See Lee, Col. 11, Lines 35-36). Claim 13 recites that validating at least one speculative chromosome comprises executing a real cost function on at least one speculative chromosome to generate a real cost associated with the at least one speculative chromosome. There is no teaching or suggestion in Lee that the "replacing" process comprises validating by executing a real cost function, as recited in claim 13. Thus, Lee and Dahl do not teach or suggest each and every element of claim 13.

Amended independent claim 16 recites two cost functions, namely, a real cost function and an incremental cost function. Amended claim 16 further recites that the incremental cost function determines a speculative cost by approximating a cost effect of an incremental change in a value set of a speculative chromosome relative to a parent chromosome and a cost associated with the parent chromosome. As stated above with respect to amended claim 1, Lee only discloses a single paging cost function. Accordingly, Lee does not teach or suggest an incremental cost function that generates a plurality of speculative costs corresponding to a plurality of value set variations of at least one of a plurality of real chromosomes and determines a speculative cost by approximating a cost effect of an incremental change in a value set of a speculative chromosome relative to a parent chromosome and a cost associated with the parent chromosome, as recited in amended claim 16.

The addition of Dahl does not cure the aforementioned deficiencies of Lee. Contrary to the assertion by the Examiner, Dahl does not teach or suggest a validator that initiates validation on at least one speculative chromosome upon satisfaction of a predetermined validation criteria, a validation comprising executing a real cost function on at least one speculative chromosome to generate a real cost associated with the at least one speculative chromosome. In amended claim 16, speculative costs and real costs are generated for at least one speculative chromosome. In Lee, a single paging cost is determined for each paging plan. In Dahl, no costs of any kind are generated. Accordingly, taken individually or in combination, Lee and Dahl fail to teach or suggest each and every element of amended claim 16.

Claims 17-18 depend either directly or indirectly from amended claim 16 and are patentable over the cited art for at least the same reasons as amended claim 16 and for the specific elements recited therein. Accordingly, claims 17-18 should be patentable over the cited art.

Amended independent claim 21 recites means for determining real costs and means for determining speculative costs. As discussed above with respect to amended claim 1, Lee discloses only paging costs. Additionally, claim 21 recites that means for determining a speculative cost for a respective speculative chromosome based on a cost of at least one parent chromosome and a cost effect based on a difference in value sets of the at least one parent chromosome and the respective speculative chromosome. Lee does not teach or suggest means for determining a speculative cost for a respective speculative chromosome based on a cost of at least one parent chromosome and a cost effect based on a difference in value sets of the at least one parent chromosome and the respective speculative chromosome, as recited in amended claim 21. Dahl does not cure the deficiencies of Lee with respect to determining real and speculative costs.

Furthermore, contrary to the Examiner's assertion in the office action, Dahl does not teach or suggest a means for postponing validation of a plurality of speculative chromosomes until a predetermined validation criteria has been satisfied, as recited in amended claim 21, since Dahl does not teach or suggest anything that corresponds to validation of a plurality of

speculative chromosomes. As stated above with respect to claim 1, there is no motivation to combine and modify the teachings of Lee and Dahl in the manner suggested by the Office Action.

Claims 22 and 24 depend from amended claim 21 and should be patentable over the cited art for at least the same reasons as amended claim 21 and for the specific elements recited therein. Accordingly, claims 22 and 24 should be patentable over the cited art.

Claim 24 further recites validation of a plurality of speculative chromosomes comprising executing means for determining a real cost on at least one speculative chromosome. Since claim 24 depends from amended claim 21, the real cost and the speculative cost is determined for at least one speculative chromosomes. Lee does not teach or suggest determining two different costs for a speculative chromosome. Thus, Lee in view of Dahl does not teach or suggest each and every element of claim 24.

For the reasons described above, claims 1, 2, 4, 5, 11-14, 16, 17-18, 21, 22 and 24 should be patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.

III. Rejection of Claims 3, 6, 7, 9, 10, 15, 20 and 23 Under 35 U.S.C. §103(a)

Claims 3, 6, 7, 9, 10, 15, 20 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Lee and Dahl, as set forth above, and further in view of 'Problem Solving With C++' by Savitch ("Savitch"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

The addition of Savitch does not cure the aforementioned deficiencies of Lee and Dahl with respect to claims 1, 11, 16 and 21, as stated above. Claims 3, 6, 7, 9 and 10, 15, 20 and 23 depend either directly or indirectly from amended claims 1, 11, 16 and 21, respectively. Accordingly, claims 3, 6, 7, 9 and 10, 15, 20 and 23 should be patentable over the cited art.

Savitch discloses basic C++ operators, including the '>' operator (the greater than operator). The Examiner states that it would be obvious to combine the C++ Boolean expressions taught in Savitch to the teaching of Lee and Dahl to make obvious each of the

applicant's specific claims to the predetermined validation criteria. Applicant respectfully disagrees with the Examiner's blanket rejection of each the applicant's specific claims to the predetermined validation criteria.

The Examiner has not stated any motivation or suggestion or manner of modifying the Boolean expressions taught by Savitch to provide the elements of the specific claims to the predetermined validation criteria recited in 3, 6, 7, 9-10, 15, 20 and 23. As stated above, the fact that a prior art reference could be modified so as to produce the claimed device is not a basis for obviousness unless the prior art suggested the desirability of such a modification. *In re Gordon*, 733 F.2d 900, 901, 221 U.S.P.Q. 1125. It is respectfully submitted that the Examiner has not set forth any reason as to why it would be desirable to implement the particular predetermined validation criteria recited in claims 3, 6, 7, 9-10, 15, 20 and 23. Additionally, as stated above, the Federal Circuit has held that in order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method. *Beckman Instruments, Inc. v LKB Produkter AB*, 892 F.2d 1547, 1551, 13 U.S.P.Q.2d, 1301. It is respectfully submitted the combination of Lee, Dahl and Savitch would not enable one skilled in the art to make the claimed invention of claims 3, 6, 7, 9-10, 15, 20 and 23, since none of the cited art discloses anything that could be construed as the predetermined validation criteria recited in claims 3, 6, 7, 9-10, 20 and 23. Thus, the combination of Lee, Dahl and Savitch does not make claim 3, 6, 7, 9-10, 20 and 23 obvious.

Specifically, Savitch does not teach or suggest assigning a speculation count to each generation of speculative chromosomes, a predetermined validation criteria being a specific speculation count, as recited in claim 3. Thus, taken individually or in combination, Lee, Dahl, and Savitch do not teach or suggest each and every element of claim 3.

Savitch does not teach or suggest that predetermined validation criteria comprises a speculative cost difference between a generation of speculative chromosomes and a plurality of real chromosomes, as recited in claim 6. Thus, taken individually or in combination, Lee, Dahl and Savitch do not teach or suggest each and every element of claim 6.

Savitch does not teach or suggest that predetermined validation criteria comprises a cost difference between a generation of speculative chromosomes and a plurality of real chromosomes exceeding a predetermined cost change limit, as recited in claim 7. Thus, taken individually or in combination, Lee, Dahl, and Savitch do not teach or suggest each and every element of claim 7.

Savitch does not teach or suggest a predetermined validation criteria comprises speculation errors associated with each generation of speculation exceeding a predetermined limit, as recited in claim 9. Thus, taken individually or in combination, Lee, Dahl and Savitch do not teach or suggest each and every element of claim 9.

Savitch does not teach or suggest a predetermined criteria comprises exceeding an execution time limit for generating subsequent generations of speculative chromosomes and generating speculative costs associated with the subsequent generation, as recited in claim 10. Thus, taken individually or in combination, Lee, Dahl and Savitch do not teach or suggest each and every element of claim 10.

Savitch does not teach or suggest that validation criteria is based on satisfying at least one of a speculative chromosome generation count, exceeding a predetermined cost change limit between speculative generations and exceeding a predetermined cost change limit between a plurality of real chromosomes and a speculative generation, as recited in claim 15. Thus, taken individually or in combination, Lee, Dahl and Savitch do not teach or suggest each and every element of claim 15.

Savitch does not teach or suggest that validation criteria is based on at least one of satisfying a speculative chromosome generation count, exceeding a predetermined cost change limit between speculative generations and exceeding a predetermined cost change limit between the plurality of real chromosomes and a speculative generation, as recited in claim 20. Thus, taken individually or in combination, Lee, Dahl and Savitch do not teach or suggest each and every element of claim 20.

Savitch does not teach or suggest that validation criteria is based on at least one of satisfying a speculative chromosome generation count, exceeding a predetermined cost change

limit between speculative generations and exceeding a predetermined cost change limit between the plurality of real chromosomes and a speculative generation, as recited in claim 23. Thus, taken individually or in combination, Lee, Dahl and Savitch do not teach or suggest each and every element of claim 23.

For the reasons described above, claims 3, 6-7, 9-10, 15, 20 and 23 should be patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 8 and 19 Under 35 U.S.C. §103(a)

Claims 8 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Lee and Dahl, as set forth above, and further in view of Choo. Withdrawal of this rejection is respectfully requested for at least the following reasons.

As stated above, claim 19 has been cancelled, accordingly, the rejection of claim 19 is moot.

Choo does not makeup for the aforementioned deficiencies of Lee and Dahl with respect to claim 1, which claim 8 depends. Specifically, Lee and Dahl, do not teach or suggest determining real costs for a plurality of first value sets represented as a plurality of real chromosomes, wherein the first values sets comprise a first plurality of circuit configurations associated with the circuit design, determining speculative costs for a plurality of second value sets represented as a plurality of speculative chromosomes, the speculative chromosomes representing value set variations of the first value sets, wherein the second values sets comprise a second plurality of circuit configurations associated with the circuit design, as recited in claim 1.

Furthermore, Lee and Dahl, do not teach or suggest any method that could be construed as postponing validation of speculative chromosomes by generating subsequent generations of speculative chromosomes and associated speculative costs from parents selected from at least one of plurality of real chromosomes and the plurality of speculative chromosomes, until a predetermined validation criteria has been satisfied, as recited in amended claim 1. Additionally, claim 8 recites that the predetermined validation criteria comprises speculative costs converging for subsequent generations of speculative chromosomes.

Choo discloses that evaluating a cost function (step 104 of FIG. 1 of Choo) may include a convergence check (See Choo, Para. [0063]). However, similarly to Lee, Choo discloses only one cost function. In contrast, in claim 8, the validation criteria comprises speculative costs converging as opposed to real costs converging. Nothing in Choo teaches or suggests that the cost function disclosed could calculate speculative costs. Accordingly, Choo does not teach or suggest that validation criteria comprises speculative costs converging for subsequent generations of speculative chromosomes, as recited in claim 8. Thus, taken individually or in combination, Lee, Dahl and Choo do not teach or suggest each and every element of claim 8. Therefore, Lee, Dahl and Choo do not make claim 8 obvious.

For the reasons described above, claim 8 should be patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.


CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Should the Examiner have any questions concerning this paper, the Examiner is invited and encouraged to contact Applicant's undersigned attorney at (216) 621-2234, Ext. 104.

No additional fees should be due for this response. In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to Deposit Account No. 08-2025.

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